

## CLAIMS

1. An organic luminescence device using a substrate with a gas-barrier film in which the gas-barrier film containing an amorphous oxide and at least two  
5 kinds of oxides selected from the group consisting of boron oxide, phosphorus oxide, sodium oxide, potassium oxide, lead oxide, titanium oxide, magnesium oxide, and barium oxide is formed on the substrate.
2. The organic luminescence device according to claim 1, wherein the  
10 selected at least two kinds of oxides are a combination of an oxide of an element having a large atomic radius and an oxide of an element having a small atomic radius.
3. The organic luminescence device according to claim 1, wherein the  
15 substrate is made of glass or plastic.
4. The organic luminescence device according to claim 3, wherein the plastic is at least one resin selected from the group consisting of acrylic resin, epoxy resin, silicon resin, polyimide resin, polycarbonate resin, polyvinyl alcohol  
20 resin, and polyethylene resin, or a copolymer thereof.
5. A method for producing an organic luminescence device using a substrate with a gas-barrier film, comprising forming the gas barrier film, which contains an amorphous oxide and at least two kinds of oxides selected from  
25 the group consisting of boron oxide, phosphorus oxide, sodium oxide, potassium oxide, lead oxide, titanium oxide, magnesium oxide, and barium oxide, on at least one surface of the substrate.
6. The method for producing an organic luminescence device according to  
30 claim 5, wherein the selected at least two kinds of oxides are a combination of an oxide of an element having a large atomic radius and an oxide of an element having a small atomic radius.
7. The method for producing an organic luminescence device according to  
35 claim 5, wherein the substrate is made of glass or plastic.
8. The method for producing an organic luminescence device according to

claim 7, wherein the plastic is at least one resin selected from the group consisting of acrylic resin, epoxy resin, silicon resin, polyimide resin, polycarbonate resin, polyvinyl alcohol resin, and polyethylene resin, or a copolymer thereof.

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9. A method for producing an organic luminescence device using a substrate with a gas-barrier film, comprising: forming the gas barrier film, which contains an amorphous oxide and at least two kinds of oxides selected from the group consisting of boron oxide, phosphorus oxide, sodium oxide,  
10 potassium oxide, lead oxide, titanium oxide, magnesium oxide, and barium oxide on at least one surface of the substrate; and thereafter, subjecting the gas-barrier film to heat treatment.

10. The method for producing an organic luminescence device according to  
15 claim 9, wherein a temperature of the heat treatment is equal to or higher than a film-formation temperature of the gas-barrier film, and equal to or lower than a glass transition temperature of the substrate.

11. The method for producing an organic luminescence device according to  
20 claim 9, wherein the selected at least two kinds of oxides are a combination of an oxide of an element having a large atomic radius and an oxide of an element having a small atomic radius.

12. The method for producing an organic luminescence device according to  
25 claim 9, wherein the substrate is made of glass or plastic.

13. The method for producing an organic luminescence device according to claim 12, wherein the plastic is at least one resin selected from the group consisting of acrylic resin, epoxy resin, silicon resin, polyimide resin,  
30 polycarbonate resin, polyvinyl alcohol resin, and polyethylene resin, or a copolymer thereof.